

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Attorney 13943US01

In the Application of: Mpr)
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U.S. Serial No.: 10/600,162)
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Filed: 6/20/2003)
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Examiner: Diep)
)
Group Art Unit: 2621)
)
Confirmation No.: 9706)

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Sir:

This is an appeal from the Office Action made Final mailed August 20, 2008 in which claims 17-22 were rejected. A Notice of Appeal was filed with the United States Patent and Trademark Office on November 20, 2008, concurrently with a pre-appeal brief. On June 9, 2009, Appellant was advised to proceed to the Board of Patent Appeals and Interferences.

In response to the Notice of Non-Compliant Appeal Brief of 11/3/2009, Applicant has revised the Grounds of Rejection, the Summary of Claimed Subject Matter, and the Evidence Appendix.

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I. REAL PARTY IN INTEREST

Broadcom Corporation, a corporation organized under the laws of the state of California and having a place of business at 16215 Alton Parkway, Irvine California 92618-3616, has acquired the entire right, title, and interest in and to the invention, the application, and any and all patents to be obtained therefore, as set forth in the Assignment filed with the present application and recorded on November 25, 2003 at Reel 014152, Frame 0575.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 1-16 are cancelled without prejudice.

Claims 17-22 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication 2006/0026637 to Gatto ("Gatto").

Appellant identifies claims 17-22 for appeal.

IV. STATUS OF AMENDMENTS

There are no amendments pending in the present application.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 17 is directed to a system for providing a plurality of videos for simultaneous display, said system comprising:

a video decoder (Specification, p. 7, Lines 3-22, Figure 1, decoder 120) for decompressing a plurality of compressed video streams (Figure 1, Video Sequences 110, Specification, p. 6, Lines 27-28, "The video sequences 110 are received at a decoder 120. The decoder 120 decodes the compressed frames 115, recovering frames 105'"), thereby resulting in a plurality of decompressed video streams, wherein each of said decompressed video streams comprises a plurality of pictures (Specification, p. 6, Lines 26-29, "The decoder 120 decodes the compressed frames 115, recovering frames 105'"); and

a register (Specification, p. 12, Lines 26-30, Figure 4, registers 405) for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams (p. 13, Lines 23-30).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 17-22 are anticipated by Gatto.

VII. ARGUMENT: CLAIMS 17

Claim 17 stands rejected under 35 U.S.C. 102(e) as being anticipated by Gatto.

Claim 17 is reproduced as follows:

A system for providing a plurality of videos for simultaneous display, said system comprising:

a video decoder for decompressing a plurality of compressed video streams, thereby resulting in a plurality of decompressed video streams, wherein each of said decompressed video streams comprises a plurality of pictures; and

a register for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams.

To anticipate a claim, the reference must teach every element of the claim. MPEP 2131. "A claim is anticipated only if each and every element as set forth in the claimed is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Appellants respectfully submit that the rejection to claim 17 should be reversed because Gatto does not teach all of the claimed limitations.

A. THE FINDING THAT GATTO TEACHES "A VIDEO DECODER FOR DECOMPRESSING A PLURALITY OF COMPRESSED VIDEO STREAMS" IN THE SINGULAR CONTEXT IS IN ERROR

Gatto is directed to "Interactive Television Devices and Systems". The "interactive TV device is configured to receive and process multiple broadband input streams simultaneously. The device includes functionality to perform as a Web browser, HF, cable and satellite TV receiver, a digital PVR, an interactive TV set-top box, an advanced central processing unit, and a video conferencing device". Abstract.

Gatto, Fig. 8 shows a screen divided into quarter screen segments 802a, 802b, 802c, 802d, each of which can

show "a combination of differently formatted video streams from a variety of providers." Gatto 0055.

However, even if, arguendo, each of the quarter segments 802a-d are deemed to be decompressed video streams, Gatto does not teach "a video decoder for decompressing a plurality of compressed video streams, thereby resulting in a plurality of decompressed video streams" with emphasis on the singular context.

In contrast, Appellants respectfully submit that Gatto teaches that each stream is decompressed by a different video decoder. Appellants call attention to Gatto 0040 that teaches that "graphics engine 192 may include ... one or more (MPEGx for example) video decoders 154". It is noted that Figure 8 includes "one or more quarter screen segments" that can display "any combination of TV channels through one or more of the four independent television tuners". Appellant respectfully submits that given the optional language of Gatto, one skilled in the art would understand displaying one or more video streams in a device with one or more video decoders to mean that if displaying two video streams, two video decoders are present, if displaying three video streams, three video decoders are present, etc.

Examiner has argued that "Gatto allows for the singular decoder implementation for processing multiple streams by itself particular since the reference teaches storage for the input streams (Gatto: paragraph 0039, lines 10-20), and since a 'watchdog' processor would monitor [to] ensure that enough of teach stream was throughput through the singular processor (Gatto: paragraph 0041, lines 8-14; video signal flow)."

Gatto 0039 teaches allowance of various memory devices, including 100 Gbytes of storage space, enabling

between about 100 and 300 hours of video recording. Assignee respectfully submits that the foregoing is only indicative of the amount of content that can be stored in Gatto, but is not indicative of the number of video decoders. There is no indication that the amount of memory required to store given numbers of video streams is dependent on the number of decoders that decompress them.

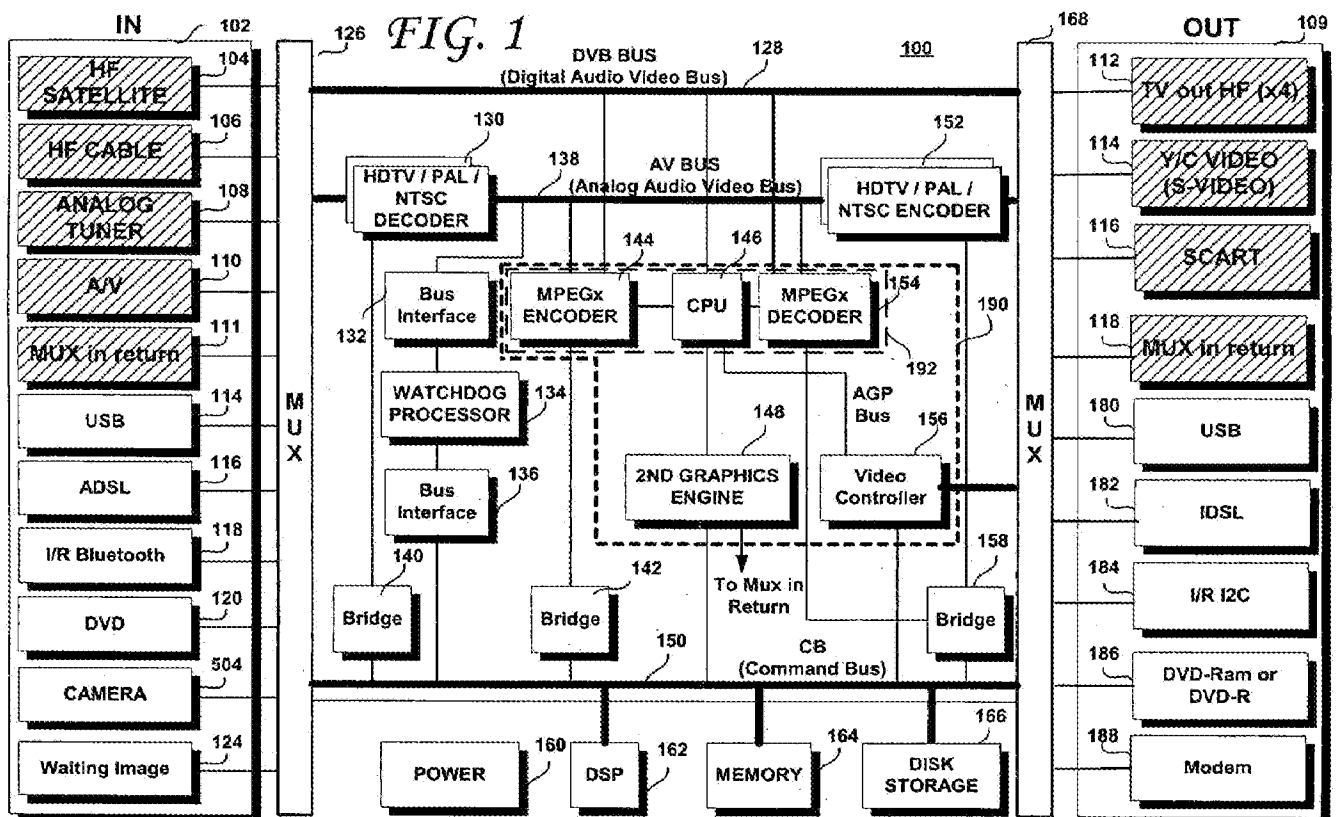
Regarding the "watchdog processor", Gatto 0041 makes no such statement that it "monitor[s to] ensure that enough of teach stream was throughput through the singular processor". To state that it "would" is simply speculation and conjecture. Appellant reiterates that "A claim is anticipated only if each and every element as set forth in the claimed is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Examiner has indicated that Gatto teaches "an interactive television devices and systems comprising the same system for providing a plurality of videos simultaneous display, said system comprising: a video decoder for decompressing a plurality of compressed video streams, thereby resulting in a plurality of decompressed video streams, wherein each of said decompressed video streams comprises a plurality of pictures (paragraph 0007 shows only a video decoder for accepting a plurality of input stream)". Final Office Action, at 4.

Appellant respectfully submits that the foregoing is in error. Gatto, Paragraph 0007 describes "a video signal decoder". Even if the "video signal decoder" is "accepting a plurality of input stream[s]", Gatto does not teach that

a "video signal decoder" for "decompressing a plurality of compressed video streams". In fact Gatto, 0007 does not even teach that the input streams are compressed. Note that Gatto 0007, Lines 10-11 teaches "*the analog bus* including a video signal decoder coupled to the input and a video signal encoder coupled to the output".

It is well known in the art that analog video signals are not compressed video signals. Moreover, Gatto does not teach that analog signals are compressed. Assignee calls attention to Figure 1, and respectfully submits that "video signal decoder" corresponds to "HDTV/PAL/NTSC Decoder 130", as opposed to "MPEGx Decoder 154".



Gatto, Figure 1

B. THE FINDING THAT GATTO TEACHES "A REGISTER FOR INDICATING A PAST PREDICTION PICTURE, AND A FUTURE PREDICTION PICTURE FOR EACH OF THE PLURALITY OF COMPRESSED VIDEO STREAMS" IS IN ERROR

Examiner has indicated that "Gatto discloses the use of an events manager slave module which manages all ... '...current and future...' events, and further discloses an events database (Gatto: paragraph [0142], lines 1-10). When those events are video based, particularly, compressed video based (Gatto: paragraph [0040], lines 10-20), a prediction index is generated for that video events database. Accordingly, the Examiner maintains that the limitation is met." Final Office Action at 3.

Assignee respectfully traverses the rejection and submits that "indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams" does not read on "current and future events". Additionally, Gatto, paragraph 0040 states that "decompression of video streams into and from the MPEGx standard is carried out in *hardware*, thereby enabling a more efficient use of processor resources and encoding and decoding functions that are independent of the current processing load on the internal processor 146 of the circuitry 100."

Accordingly, Assignee respectfully submits that "a register for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams" does not read on the "events database (Gatto: paragraph [0142], lines 1-10)."

Examiner states on page 4 of the final rejection that Gatto teaches "a register for indicating a past prediction picture, and a future prediction picture for each of the

plurality of compressed video streams (paragraph 0009 shows MPEG which comprises I, P, and B frames and since MPEG involves predictive coding, registers or frame memories must be reserved at the decoder so one can predict pictures in the GOP based on those stored reference frames)". Examiner provided the same basis in the previous office action.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). See also MPEP 2112.

Examiner has indicated that "since MPEG involves predictive coding, registers or frame memories must be reserved at the decoder so one can predict pictures in the GOP based on those stored reference frames". As an initial matter, if "registers or frame memories must be reserved", then "registers" are not necessarily present.

Moreover, that registers and/or frame memories "must be reserved at the decoder so one can predict pictures in the GOP based on those stored reference frames" is not a teaching of "a register for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams".

VIII. ARGUMENT: CLAIM 18

Claims 18 stands rejected under 35 U.S.C. 102(e) as anticipated by Gatto. Claim 18 recites:

The system of claim 17, wherein the video decoder motion compensates motion estimated pictures in each of the plurality of compressed video streams using at least the past prediction pictures indicated by said register for each of the plurality of compressed video streams.

Examiner has indicated that the foregoing is "inherently included in the MPEG standards". Assignee respectfully submits that "motion compensates ... using at least the past prediction pictures indicated by said register for each of the plurality of compressed video streams", is not required by the MPEG standards. The MPEG standards make no such requirement of a "register" to "indicate".

Moreover, if the claimed register was *required* by the MPEG standards, Appellant respectfully requests citation to the particular section that requires the register.

Accordingly, Assignee respectfully requests that the rejection to claim 18 be **REVERSED**.

IX. ARGUMENT - CLAIMS 19, 21, AND 22

Claims 19, 21, and 22 recite, respectively:

19. The system of claim 17, wherein said register indicates a picture for display for each of the plurality of compressed video streams, and further comprising:

a display engine for providing an output, said output concatenating the pictures for display for each of the plurality of compressed video streams indicated by the register.

21. The system of claim 19, wherein the display engine examines the register, selects the pictures indicated by the register for display, and concatenates the pictures indicated for display by the register.

22. The system of claim 21, wherein the display engine requests the pictures indicated by the register for display, from a frame buffer.

Examiner has indicated that Gatto teaches "a display engine for providing an output, said output concatenating the pictures for display for each of the plurality of compressed video streams indicated by the register as specified in claim 19; the display engine examines the register, selects the pictures indicated by the register for display, and concatenates the picture indicated for

display by the register; and the display engine requests the pictures indicated by the register for display, from the frame buffer as specified in claims 21-22 (fig. 8 and paragraphs 0036, 0040, 0142-0145: the events manager slave module 1208 may access an events database 1222 (or some other structure configured to store events information), which may include an entry for each current and future event carried out or to be carried out by the home application 1200 running on the present interactive TV device. The events database 1222 may, according to an embodiment of the present invention, store an event ID, which is a chronologically-assigned number for each event, an indication of the type of event (display of a channel, recording of a channel, etc.)..., and [0145] h) A video editor slave module 1214, which enables the user to edit a stored video stream using a full function video editor.) as specified in claims 19 and 20-22".

Assignee respectfully submits that none of "fig. 8 and paragraphs 0036, 0040, 0142-0145: the events manager slave module 1208", "events database 1222" are an express teaching of "concatenating the pictures for display for each of the plurality of compressed video streams indicated by the register" (claim 19), "selects the pictures indicated by the register for display, and concatenates the pictures indicated for display by the register" (claim 21) or the claimed "wherein the display engine requests the pictures indicated by the register for display, from a frame buffer."

Appellants respectfully submit that Gatto does not even expressly teach that the events database plays any

role in determining which ones of the pictures in a frame buffer are to be displayed.

Accordingly, Assignee respectfully requests that the rejections to claims 19, 21, and 22 be REVERSED.

X. CONCLUSION

For the foregoing reasons, claims 17-22 are distinguishable over the prior art of record. Reversal of the Examiner's rejection and issuance of a patent on the application are therefore requested.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Dated: February 3, 2010

Respectfully submitted,

/Mirut P. Dalal/

Mirut P. Dalal
Registration No. 44,052
Attorney for Appellant

MCANDREWS, HELD & MALLOY, LTD.
500 West Madison Street, 34th Floor
Chicago, IL 60661

Telephone: (312) 775-8000
Facsimile: (312) 775-8100

CLAIMS APPENDIX

1-16. (Cancelled)

17. A system for providing a plurality of videos for simultaneous display, said system comprising:

a video decoder for decompressing a plurality of compressed video streams, thereby resulting in a plurality of decompressed video streams, wherein each of said decompressed video streams comprises a plurality of pictures; and

a register for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams.

18. The system of claim 17, wherein the video decoder motion compensates motion estimated pictures in each of the plurality of compressed video streams using at least the past prediction pictures indicated by said register for each of the plurality of compressed video streams.

19. The system of claim 17, wherein said register indicates a picture for display for each of the plurality of compressed video streams, and further comprising:

a display engine for providing an output, said output concatenating the pictures for display for each of the plurality of compressed video streams indicated by the register.

20. The system of claim 17, wherein a single video decoder decompresses the plurality of compressed video streams, thereby resulting in the plurality of decompressed video streams, wherein each of said decompressed video streams comprises the plurality of pictures.

21. The system of claim 19, wherein the display engine examines the register, selects the pictures indicated by the register for display, and concatenates the pictures indicated for display by the register.

22. The system of claim 21, wherein the display engine requests the pictures indicated by the register for display, from a frame buffer.

EVIDENCE APPENDIX

(None)

RELATED PROCEEDINGS APPENDIX

There are no pages in this Appendix.